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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,568	09/15/2000	Alexandre S. Kossatchev	10130RO	2178
27820	7590	10/08/2003	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C. P.O. BOX 1287 CARY, NC 27512			SHRADER, LAWRENCE J	
			ART UNIT	PAPER NUMBER
			2124	17

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,568

Applicant(s)

KOSSATCHEV ET AL.

Examiner

Lawrence Shrader

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☒ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13,14,15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to the amendment filed on July 18, 2003.
2. Claims 1 – 25 remain pending.
3. Applicant's arguments with respect to claims 1 – 25 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1, 18, and 24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “skeleton definition language” is not clearly defined. The Examiner interprets it as any skeleton language used to define a test suite.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 5; 18 – 23; 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al., U.S. Patent 6,510,402 (hereinafter referred to as Logan) in view

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of Caughran et al., U.S. Patent 6,381,604 (hereinafter referred to as Caughran), and further in view of Ushiku, U.S. Patent 6,146,026.

In regard to claim 1:

Logan discloses a component testing system comprising:

“decomposing existing test suites...having automatically generated components and manually developed components...” The Logan invention exposes (decomposes) the construction of components in a class (column 7, lines 35 – 39) written in the test suite implementation language, but does not teach the decomposition performed on existing test suites. However, Caughran teaches a means to examine an existing test suite and to manually add tests to an existing suite so that the tests might be modified or analyzed (column 5, lines 33 – 35). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify decomposition function of the Logan invention with the feature of providing for exposing or decomposing of the components of existing test suites in the Caughran invention, because this modification suggests that the manual decomposition feature of Caughran can be systematically automated by the Logan system that exposes component features in a test environment which generates test case code, as taught by Logan (column 7, lines 39 – 46).

“defining one or more standard schemes of procedure testing based on the decomposition of the test suites.” Logan discloses a basic test structure comprising three different test schemes (column 8, lines 13 – 19).

“providing skeleton description for each scheme in skeleton definition language.”

Neither Logan nor Caughran teaches providing a skeleton description for each scheme.

However, Ushiku discloses skeletons used to create pages of text using a HTML as a skeleton

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description language to describe a published page (column 4, lines 48 – 52). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify decomposition function of the Logan invention with the feature of providing for exposing or decomposing of the components of existing test suites in the Caughran invention, further modified with the skeleton description in a description language in the Ushiku invention, because the use of the skeleton description language of Ushiki provides a place holder means that could be used to describe the test schemes derived from existing test suites gained by the combination of the Logan and Caughran inventions so that a final product (a test suite) with information inserted in the skeleton can be produced as taught by Ushiku (column 5, lines 7 – 14).

“transforming the skeleton description for each scheme into a skeleton tool for generating the test suite of the scheme.” Neither Logan nor Caughran teaches transforming a skeleton description into a skeleton tool for generating the test suite of the scheme. However, Ushiku discloses skeletons used to create pages of text using a HTML as a skeleton description language (column 4, lines 48 – 52), and generates a body of description language for page information by replacing the skeleton description language (column 5, lines 7 – 14).).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify decomposition function of the Logan invention with the feature of providing for exposing or decomposing of the components of existing test suites in the Caughran invention, further modified with the skeleton description in a description language in the Ushiku invention, because the use of the skeleton description language of Ushiki provides a place holder means that could be used to describe the test schemes derived from existing test suites gained by the combination of the Logan and Caughran inventions so that a final product (a test suite) with

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information inserted in the skeleton can be produced as taught by Ushiku (column 5, lines 7 – 14).

In regard to claim 2, incorporating the rejection of claim 1:

“the decomposing step includes a step of identifying an invariant test suite part ...;”

Logan teaches the identification of an invariant test suite (see basic test structure at column 8, lines 7 – 20), and a step to create a description of the invariant part supporting three major types of tests (column 8, lines 7 – 20, column 12, lines 34 – 35).

“the skeleton description providing step includes a step of creating an invariant test suite description based on the invariant test suite part.” Although Logan teaches an invariant test suits, neither nor Logan teaches a skeleton description for each testing scheme based on an invariant test suite part. However, Ushiku discloses skeletons used to create pages of text using a HTML as a skeleton description language (column 4, lines 48 – 52), and generates a body of description language for page information by replacing the skeleton description language (column 5, lines 7 – 14). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify decomposition function of the Logan invention with the feature of providing for exposing or decomposing of the components of existing test suites in the Caughran invention, further modified with the skeleton description in a description language in the Ushiku invention, because the use of the skeleton description language of Ushiki provides a place holder means that could be used to describe the test schemes, including the invariant parts, derived from existing test suites gained by the combination of the Logan and Caughran inventions so that a final product (a test suite) with information inserted in the skeleton can be produced as taught by Ushiku (column 5, lines 7 – 14).

In regard to claim 3, incorporating the rejection of claim 1:

“the decomposing step includes a step includes a step of identifying a skeleton parameter;”

“the skeleton description providing step includes a step of creating a skeleton parameter identifier based on the identified skeleton parameter.”

Logan teaches, through a JAVA introspection facility, that arguments (parameters) and their data types are identified and integrated into the skeleton (column 7, lines 46 – 54).

In regard to claims 4 and 5, incorporating the rejection of claim 3:

“...wherein the skeleton parameter includes a text string or an integer.”

“...wherein the skeleton parameter includes an array of text strings or integers.”

Logan teaches the method of forming a skeleton based on the JAVA language, which one skilled in the art would know inherently includes data types of text strings, integers, and arrays of strings.

In regard to claim 18 (a system corresponding to the method of claim 1): Claim 18 is rejected for the same reasons put forth in the rejection of claim 1.

In regard to claim 19, incorporating the rejection of claim 18:

“...the decomposer includes a feature identifier for identifying particular features of the test suites.” Logan discloses that the “desired partition and associated test suites for performing the test are selected” at step 304 in Figure 3 (column 4, lines 45 – 51), forming a decomposition function. In order to “select,” a process must be inherent to the system that would identify appropriate features prior to selection in order to incorporate those features in the test suite.

In regard to claim 20, incorporating the rejection of claim 18:

“...the skeleton describer includes a creator for creating parts of skeleton...” Logan discloses that a partition is built to run on a web browser to create an integrated test environment wherein a client machine is used to modify or copy a test suite (column 4, lines 33 – 65; column 7, lines 1 – 10).

In regard to claim 21 (a system corresponding to the method of claims 2, 3, 6, 8, 10, and 13), incorporating the rejection of claim 19:

“an invariant test suite part identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 2 (the corresponding method).

“a skeleton parameter identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 3 (the corresponding method).

“a repetitive part identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 6 (the corresponding method).

“a variant identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 8 (the corresponding method).

“a manually-developed component identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 10 (the corresponding method).

“an automatically-developed identifier...” Rejected for the same corresponding reasons put forth in the rejection of claim 13 (the corresponding method).

In regard to claim 22 (a system corresponding to the method of claims 2, 3, 6, 8, 10, and 13), incorporating the rejection of claim 21:

“an invariant description creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 2 (the corresponding method).

“a parameter identifier creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 3 (the corresponding method).

“a repetitor creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 6 (the corresponding method).

“a variant descriptor creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 8 (the corresponding method).

“a first slot descriptor creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 10 (the corresponding method).

“a second slot descriptor creator...” Rejected for the same corresponding reasons put forth in the rejection of claim 13 (the corresponding method).

In regard to claim 23 (a system corresponding to the method of claim 15), incorporating the rejection of claim 22: Claim 23 is rejected for the same reasons put forth in the rejection of claim 15).

In regard to claim 24:

The following limitations identical to claim 1 are rejected for the same reasons given in the rejection of claim 1:

“Decomposing...”; “defining...”; “providing...”; “transforming...”.

The following additional limitations rejected for the following reasons:

“Generating a test suite template...” Logan teaches a method for using a skeleton tool with specifications (expected outcomes) from the PIUT (column 8, lines 8 – 29).

“Filling the test suite template...” Logan teaches that a basic test structure in which parts are hand coded (column 8, lines 8 – 13).

In regard to claim 25, incorporating the rejection of claim 24:

Official notice is taken that it would be understood by one skilled in the art that an implementation language might be compiled in order to be executed on a system.

7. Claims 6 – 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al., U.S. Patent 6,510,402 (hereinafter referred to as Logan) in view of Kirsch, U.S. Patent 5,987,239.

In regard to claim 6, incorporating the rejection of claim 1:

“the decomposing step includes a step of identifying a repetitive part of the test suite;”

“the skeleton description providing step includes a step of creating a repetitor describing the identified repetitive part of the test suite.”

Logan teaches a method of identifying test suites, defining schemes of procedure testing, providing skeleton description, and generation of a test suite, but does not teach the identification of a repetitive part of the test suite. However, Kirsch teaches a method of identifying a repetitive part of a system described in a skeleton definition language using macros in place to substitute for repetitious microcode (column 1, lines 58 – 63); column 3, lines 20 – 40). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify

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the test suite as described by Logan with the step of identifying a repetitive part of a program as taught by Kirsch, because one skilled in the art would understand that a repetitive part of the test suite might be described and applied in the test as taught by Kirsch providing an enhancement of Logan's teaching with more versatile features for modifying and/or improving the new test suite being generated.

In regard to claim 7, the rejection of claim 6 being incorporated:

Claim 7 is rejected because one skilled in the art would know that a logical implementation of a repetitor step is a macro as taught by Kirsch, which is designed for repetitive functions. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the test suite as described by Logan with the step of identifying a repetitive part of a program as taught by Kirsch, because one skilled in the art would understand that a repetitive part of the test suite might be described and applied in the test as taught by Kirsch providing an enhancement of Logan's teaching with more versatile features for modifying and/or improving the new test suite being generated.

In regard to claim 8, incorporating the rejection of claim 1:

"the decomposing step includes a step includes a step of identifying a variant of the test suite;"

"the skeleton description providing step includes a step of creating a variant descriptor describing the identified variants of the test suite."

Logan teaches that modified (variant) test suites are identified and a means to identify what components have been changed (column 7, lines 1 – 12).

In regard to claim 9, incorporating the rejection of claim 8:

“...the variant descriptor is written in a macro-language.” Logan does not explicitly disclose macros. However, Kirsch discloses the use of macros to insert micro code into a skeleton (column 3, lines 27 – 40; e.g., Figures 1, 4, and 5). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the test suite as described by Logan with teaching of Kirsch using macros in the skeleton for the insertion of code, because the use of macros allows one to specify a location within the skeleton description language where the code to be inserted, as taught by Kirsch (column 2, lines 30 – 36).

In regard to claim 15, incorporating the rejection of claim 1:

“...the defining step includes a step of separating procedure testing into different types...based on dependency of parameters” Logan’s disclosure separates the testing into three major types (or standard schemes) of tests for execution (column 8, lines 13 – 19), and further discloses that each test case is identified and integrated into the skeleton (column 7, lines 46 – 54) based on arguments (parameters) and data types.

In regard to claim 16, incorporating the rejection of claim 1:

“...the defining step includes a step of separating procedure testing into different types...based on sequences of testing of a group of procedures.” Logan’s disclosure separates the testing into three major types (or standard schemes) of tests for execution (column 8, lines 13 – 19), and further discloses (column 8, lines 2 – 6) that the generated skeleton can be individualized for specific test cases and automatically executes each test case (“based on sequences of testing of a group of procedures”).

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8. Claims 10 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al., U.S. Patent 6,510,402 in view of Loukianov, U.S. Patent 6,249,526, and further in view of Kirsch, U.S. Patent 5,987,239.

In regard to claims 10 and 13, both incorporating the rejection of claim 1:

(claim 10) “the decomposing step includes a step of identifying a manually-developed component of the test suite;”

“the skeleton description providing step includes a step of creating a slot descriptor describing a slot for receiving a component...”

(claim 13) “the decomposing step includes a step of identifying an automatically-generated component of the test suite;”

“the skeleton description providing step includes a step of creating a slot descriptor describing a slot for receiving a component...”

Logan teaches a method of identifying test suites having manually and automatically generated components, defining schemes of procedure testing, providing skeleton description, and generation of a test suite (see Figure 5), but does not teach the method of creating a slot description for receiving components of the test suite. However, Loukianov teaches the use of slot descriptors to describe the action to be performed in the slot, which describes the action of a component (column 1, lines 54 – 57). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the slot descriptor for receiving components as taught by Loukianov with the test suite as taught by Logan because one skilled in the art would know that the descriptor holds criteria, which could include criteria specifying either manually developed components or automatically generated components, then the test

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suite slots might be specifically distinguished and utilized for either manually generating components or automatically generated components.

In regard to claims 11 and 14, incorporating the rejection of claims 10 and 13 respectively):

“...the slot descriptor is written in a macro-language.”

Neither Logan nor Loukianov teaches that a slot descriptor is written in a macro language. However, Kirsch teaches that a skeleton is written in a macro language (column 3, lines 27 – 40). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the slot descriptor for receiving components as taught by Loukianov with the test suite as taught by Logan because, further modified by the teaching of Kirsch that a macro is used in skeleton, because one skilled in the art would know that a slot descriptor could be written in a macro because a slot takes repetitive input, and a macro provides the means to duplicate or repeat a function for a specific input condition.

In regard to claim 12, incorporating the rejection of claim 10:

“...the slot descriptor provides rigorously defined semantics for manual slot filling.”

Logan teaches an automatic checklist processing to support manual testing activities (column 8, lines 16 – 17), which corresponds to “rigorously defined semantics for manual slot filling” in the claim.

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Logan et al., U.S. Patent 6,510,402 (hereinafter referred to as Logan), in view of Caughran et al., U.S. Patent

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6,381,604 (hereinafter referred to as Cuaghran), and further in view of Ushiku, U.S. Patent 6,146,026, as applied in the rejection of claim 1 above, and further in view of Ahanessians et al., U.S. Patent 6,401,230 (hereinafter referred to as Ahanessians).

Neither Logan, Caughran, nor Ushiku teaches the method of creating a file of parameters and components, although this is suggested in column 7, lines 39 – 41 of Logan. However, Ahanessians teaches the creation of a component and parameter file (column 5, lines 26 – 28; column 12, lines 8 – 33). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the test suite as taught by Logan with the component parameter file as taught by Ahanessians in order to provide skeleton configuration information for use in several functions as taught by Ahanessians (column 12, lines 16 – 33).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 6,093,215 to Buxton et al., regarding building templates in a component system.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Shrader whose telephone number is (703) 305-8046. The examiner can normally be reached on M-F 08:00-16:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Lawrence Shrader
Examiner
Art Unit 2124

September 30, 2003

A handwritten signature in black ink, appearing to read "John Chavis".

JOHN CHAVIS
PATENT EXAMINER
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